



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/717,241	11/22/2000	Yatish Pathak	2664.4	2770
27160	7590	04/06/2005		
KATTEN MUCHIN ZAVIS ROSENMAN 525 WEST MONROE STREET CHICAGO, IL 60661-3693			EXAMINER WAHBA, ANDREW W	
			ART UNIT	PAPER NUMBER
			2661	

DATE MAILED: 04/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/717,241	Applicant(s) PATHAK ET AL.	
	Examiner Andrew W Wahba	Art Unit 2661	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4,5,7-25,28-36 and 46-128 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 88-108 is/are allowed.
- 6) ☒ Claim(s) 1,4,5,7-16,20-25,28-36,46-85,87,109-119,121-126 and 128 is/are rejected.
- 7) ☒ Claim(s) 17, 18, 79, 86, 120 and 127 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 October 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>6/22/01</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's arguments with respect to claims 1, 4, 5, 7-25, 28-36, and 46-128 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4, 5, 7-16, 20-25, 28-36, and 46-79, 80-85, 87, 109-119, 121-126 and 128 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorsuch et al, hereinafter "Gorsuch" (US Patent 6,526,251) in view of Cox (US Patent (6,154,643).

With regard to claim 1, Gorsuch discloses a bandwidth manager 174 (network utilization manager) at the base station (column 4, line 43) and a bandwidth manager 134 (network utilization manager) at the subscriber (column 4, line 20). Gorsuch discloses base station 170 (base station) (column 4, line 42-44). Gorsuch discloses subscriber units 101 and 102 (subscriber stations) with terminal equipment 110 and 112 (subscriber communication port) (column 4, lines 22-23 and 61-64).

Gorsuch does not expressly disclose wherein each said subscriber station is configured to request said network utilization manager to establish a connection to said at least one subscriber communication port, said network utilization manager determining both a required data rate and a desired data rate for said connection from

Art Unit: 2661

said request, and wherein monetary charges associated with said connection differ according to whether said connection is established at said required data rate or said desired data rate.

Cox discloses a system controller 10 (network utilization manager) that receives requests from subscriber 3 for bandwidth greater (desired data rate) than the minimum (required data rate) and determines whether the system 1 can meet this request (column 4, lines 52-57). If the requested bandwidth is implemented the billing center may utilize a different (differ) tariff (monetary charges) for the operation of the changed bandwidth (column 5, lines 13-17).

A person of ordinary skill in the art would have been motivated to employ Cox in Gorsuch so as to bill subscribers for allocated bandwidth (Cox, column 2, lines 60-63). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Gorsuch and Cox (*collectively*, Gorsuch-Cox) so as to obtain the invention as specified in claim 1.

With regard to claim 4, Cox discloses a system controller 10 (network utilization manager) that receives requests from subscriber 3 for bandwidth greater than the minimum (QOS level required) and determines whether the system 1 can meet this request (column 4, lines 52-57).

With regard to claim 5, Cox discloses a system controller 10 (network utilization manager) that receives requests (request) from subscriber 3 for bandwidth greater (QOS level required) than the minimum (QOS level required) and determines whether the system 1 can meet this request (column 4, lines 52-57).

With regard to claim 7, Cox discloses that if the requested bandwidth is implemented the billing center may utilize a different (differ) tariff (monetary changes) for the operation of the changed bandwidth (column 5, lines 13-17).

With regard to claims 8, 71 and 112, Gorsuch further discloses that bases station 170 is connected to the PSTN 180 (PSTN gateway) (column 4, lines 47-48).

With regard to claims 9, 72 and 113, Gorsuch further discloses that base station 170 is connected to the PSTN 180 using primary rate ISDN, IS –634 or V5.2. (backhaul connection) (column 4, lines 50-53).

With regard to claims 10, 84 and 125, Gorsuch discloses a data handler 426 that performed packet assembly (packet network) and buffering for transmission (column 7, lines 58-61).

With regard to claims 11, 73 and 114, Gorsuch further discloses an ISDN modem 120 that relays voice and data (data communication port) to terminal equipment 110 and 112 (column 4, lines 13-14).

With regard to claims 12, 74 and 115, Gorsuch further discloses that the subscriber unit may provide higher speed data services (Ethernet communication port) (column 4, lines 59-60).

With regard to claims 13, 75 and 116, Gorsuch further discloses an ISDN modem 120 that relays voice (radio) and data to terminal equipment 110 and 112 (column 4, lines 13-14). Alternatively, the Office takes official notice that a wireless connection, such as Bluetooth, may be employed between the subscriber and another data device such as a PDA.

With regard to claims 14, 76 and 117, Gorsuch further discloses an ISDN modem 120 that relays voice (telephony) and data to terminal equipment 110 and 112 (column 4, lines 13-14). Figure 1 illustrates two telephony ports.

With regard to claims 15, 77 and 118, Gorsuch further discloses an ISDN modem 120 that relays voice (telephony) and data to terminal equipment 110 and 112 (column 4, lines 13-14). It is well known in the art that a telephone port may be employed to transmit data.

With regard to claims 16, 78 and 119, Gorsuch further discloses a bandwidth request module 740 that may include electing the request with the highest priority in which a list of available channels is analyzed and assigned (assigning capacity) based on need, availability and priority (column 10, lines 16-22). In electing the request with the highest priority, a table identifying requests and their respective priorities is inherent.

With regard to claims 19, 82, and 123, the office take official notice that sectoring cells in a wireless communication systems is well known and is used to make the most repeat usage of allocated bandwidth.

With regard to claims 20, 80, 85 and 121, Gorsuch further discloses a plurality of base stations 170 (two base stations) (column 3, line 37-38) each of which has a bandwidth manager 174 (network utilization manager) (column 4, line 43). Alternatively, Cox discloses a plurality of base stations 8 and a system controller 10 as illustrated in Figure 2. As the system controller serves several base stations, its function may be called distributed.

With regard to claims 22, 81 and 122, further discloses an ISDN modem 120 that relays voice (telephony) and data to terminal equipment 110 and 112 (column 4, lines 13-14). As the modem has a plurality of ports the router is inherent.

With regard to claims 23, 83 and 124, further discloses an ISDN modem 120 that relays voice (telephony) and data to terminal equipment 110 and 112 (column 4, lines 13-14). As the modem has a plurality of ports the switch is inherent.

With regard to claims 21 and 126, Cox discloses a plurality of base stations 8 (base station) connected (backhaul) a system controller 10 (network management center) as illustrated in Figure 2. As the system controller serves several base stations, its function may be called distributed.

With regard to claims 46, 87 and 128, Gorsuch discloses voice (voice) and data (data) communication to terminal equipment 110 and 112 (column 4, lines 13-14).

With regard to claim 68, Gorsuch discloses a bandwidth manager 174 (network utilization manager) at the base station (column 4, line 43) and a bandwidth manager 134 (network utilization manager) at the subscriber (column 4, line 20). Gorsuch discloses base station 170 (base station) (column 4, line 42-44). Gorsuch discloses subscriber units 101 and 102 (subscriber stations) with terminal equipment 110 and 112 (subscriber communication port) (column 4, lines 22-23 and 61-64).

Gorsuch does not expressly disclose wherein each said subscriber station requests said network utilization manager establish a connection to said at least one subscriber communication port, said network utilization manager determining required data rate for said connection from said request, and wherein said network utilization

manager further determines both least one QOS level required for said connection and at least one QOS level desired for said connection from said request.

Cox discloses a system controller 10 (network utilization manager) that receives requests from subscriber 3 for bandwidth greater (QOS level required) than the minimum (QOS level required) and determines whether the system 1 can meet this request (column 4, lines 52-57).

A person of ordinary skill in the art would have been motivated to employ Cox in Gorsuch so as to bill subscribers for allocated bandwidth (Cox, column 2, lines 60-63). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Gorsuch and Cox (*collectively*, Gorsuch-Cox) so as to obtain the invention as specified in claim 68.

With regard to claim 69, Cox discloses a system controller 10 (network utilization manager) that receives requests (request) from subscriber 3 for bandwidth greater (desired data rate) than the minimum (required data rate) and determines whether the system 1 can meet this request (column 4, lines 52-57).

With regard to claim 70, Cox further discloses that if the requested bandwidth is implemented the billing center may utilize a different (differ) tariff (monetary changes) for the operation of the changed bandwidth (column 5, lines 13-17).

With regard to claims 109, 110 and 111, Cox discloses a system controller 10 (network utilization manager) that receives requests (request) from subscriber 3 for bandwidth greater (desired data rate / desired QOS level) than the minimum (required data rate / required QOS level) and determines whether the system 1 can meet this

request (column 4, lines 52-57). Cox further discloses that if the requested bandwidth is implemented the billing center may utilize a different (differ) tariff (monetary changes) for the operation of the changed bandwidth (column 5, lines 13-17).

With regard to claim 24, Gorsuch discloses a transceiver 140 (radio) (column 4, line 1) located between antenna 150 (antenna) (column 4, line 2) and ISDN modem 120 (modem) (column 4, lines 9-15) as illustrated in Figure 1. Gorsuch further discloses and a bandwidth manager 134 (processor ... to manage ... transmission capacity) at the subscriber (column 4, line 20). Gorsuch further discloses an ISDN modem 120 that relays voice and data to terminal equipment 110 and 112 (two communication ports) (column 4, lines 13-14).

Gorsuch does not expressly discloses wherein said processor is configured to communicate data transmission capacity requirements for a desired connection from either of said communication ports to said base station which evaluates said requirements before authorizing said connection, and wherein said processor is also configured to communicate at least one quality of service requirement for said desired connection to said base station which evaluates said data transmission capacity and quality of service requirements before authorizing said connection.

Cox discloses a system controller 10 (evaluates said requirements, *via a base station*) that receives requests (communicate data transmission capacity requirements) from subscriber 3 for bandwidth greater (quality of service requirement) than the minimum (quality of service requirement) and determines (evaluates said data

transmission capacity and quality of service) whether the system 1 can meet this request (authorizing said connection) (column 4, lines 52-57).

A person of ordinary skill in the art would have been motivated to employ Cox in Gorsuch so as to bill subscribers for allocated bandwidth (Cox, column 2, lines 60-63). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Gorsuch and Cox (*collectively*, Gorsuch-Cox) so as to obtain the invention as specified in claim 24.

With regard to claims 25 and 48, Gorsuch further discloses an ISDN modem 120 that relays voice and data to terminal equipment 110 and 112 (column 4, lines 13-14). Terminal equipment 110 may be a computer or PDA (column 3, lines 41-42). Terminal equipment 112 is a telephone (column 3, line 56).

With regard to claims 28 and 49, Gorsuch further discloses an ISDN modem 120 that relays voice and data (type of connection) to terminal equipment 110 and 112 (column 4, lines 13-14). Terminal equipment 110 may be a computer or PDA (column 3, lines 41-42). Terminal equipment 112 is a telephone (column 3, line 56).

With regard to claims 29 and 30, Gorsuch further discloses and a bandwidth manager 134 (processor) at the subscriber (column 4, line 20). Cox discloses a system controller 10 (*via a base station*) that receives requests (communicates ... data transmission capacity requirements) from subscriber 3 for bandwidth greater (higher level of a desired level of data transmission) than the minimum (decrease data transmission capacity) and determines (determines which level) whether the system 1 can meet this request (authorizing) (column 4, lines 52-57). Accordingly, Gorsuch-Cox

would also decrease data transmission capacity to the disclosed minimum, in the event that data channels were not being utilized.

With regard to claims 31 and 52, Gorsuch further discloses that the bandwidth manager 134 allocates CDMA channels as required and includes dynamic (prioritizes) management of bandwidth allocated to a given session (column 4, lines 29).

Alternatively, Cox discloses a priority status (prioritization) (column 4, lines 25-30).

With regard to claims 32 and 53, Cox discloses 32 kb/s are allocated for telephone calls (port) and 64 kb/s are allocated for modem connections (port) (column 4, line 31-32 and 54-55).

With regard to claim 33, 34, 35, 36, 54, 55, 56 and 57, Gorsuch discloses voice (type/voice) and data (type/data) communication to terminal equipment 110 and 112 (column 4, lines 13-14). Accordingly, minimum bandwidth (QoS) and data rate (QoS) are inherent. Alternatively, Cox discloses 32 kb/s (transmission capacity / quality of service) are allocated for telephone calls (type of connection / voice) and 64 kb/s (transmission capacity / quality of service) are allocated for modem connections (type of connection / data) (column 4, line 31-32 and 54-55). Accordingly, the office takes official notice that data may employ internet protocol.

With regard to claim 47, Gorsuch discloses a transceiver 140 (radio) (column 4, line 1) located between antenna 150 (antenna) (column 4, line 2) and ISDN modem 120 (modem) (column 4, lines 9-15) as illustrated in Figure 1. Gorsuch further discloses and a bandwidth manager 134 (processor ... to manage ... transmission capacity) at the subscriber (column 4, line 20). Gorsuch further discloses an ISDN modem 120 that

relays voice and data to terminal equipment 110 and 112 (two communication ports) (column 4, lines 13-14).

Gorsuch does not expressly disclose wherein said processor is configured to communicate a required level of data transmission capacity requirements for a desired connection from either of said base station which evaluates said communication ports to said requirements before authorizing said connection, and is configured to communicate wherein said processor desired level of data a higher requirements which determines which level of data transmission capacity transmission capacity for said desired connection to said base station requirements at which to authorize establishment of said connection, and wherein after said connection has been authorized said desired level data transmission capacity requirements, said subscriber station is configured to receive instruction from said base station to decrease the data transmission capacity authorized for said connection to a level below said desired level but at least equal to said required level.

Cox discloses a system controller 10 (*via a base station*) that receives requests (communicates ... data transmission capacity requirements) from subscriber 3 (subscriber station) for bandwidth greater (desired level) than the minimum (required level / decrease data transmission capacity) and determines whether the system 1 can meet this request (authorizing establishment of said connection) (column 4, lines 52-57). Accordingly, Gorsuch-Cox would also decrease data transmission capacity to the disclosed minimum, in the event that data channels were not being utilized.

A person of ordinary skill in the art would have been motivated to employ Cox in Gorsuch so as to bill subscribers for allocated bandwidth (Cox, column 2, lines 60-63). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Gorsuch and Cox (*collectively*, Gorsuch-Cox) so as to obtain the invention as specified in claim 47.

With regard to claim 50, Gorsuch discloses and a bandwidth manager 134 (processor) at the subscriber (column 4, line 20). Cox discloses a system controller 10 (*via a base station*) that receives requests (communicates at least one quality of service requirement) from subscriber 3 for bandwidth greater (desired connection) than the minimum and determines (evaluates data transmission capacity) whether the system 1 can meet this request (authorizing) (column 4, lines 52-57). Accordingly, Gorsuch-Cox would also decrease data transmission capacity to the disclosed minimum, in the event that data channels were not being utilized.

With regard to claim 51, Cox discloses 32 kb/s are allocated for telephone calls (type of connection) and 64 kb/s are allocated for modem connections (type of connection) (column 4, line 31-32 and 54-55).

With regard to claim 58, Gorsuch discloses a transceiver 140 (radio) (column 4, line 1) located between antenna 150 (antenna) (column 4, line 2) and ISDN modem 120 (modem) (column 4, lines 9-15) as illustrated in Figure 1. Gorsuch further discloses and a bandwidth manager 134 (processor ... to manage ... transmission capacity) at the subscriber (column 4, line 20). Gorsuch further discloses an ISDN modem 120 that

relays voice and data to terminal equipment 110 and 112 (two communication ports) (column 4, lines 13-14).

Gorsuch does not expressly disclose wherein data transmission capacity and quality of service requirements for a connection are determined by said subscriber station based upon the type established, connection to be wherein said determination includes distinguishing between a desired voice connection, connection and a desired data wherein for desired determination further includes data connections, said determining the type of data of said desired data connection, and wherein said type of data is determined by examining the internet protocol port to which said data is addressed.

Cox discloses a system controller 10 that receives requests (data transmission capacity and quality of service requirements) from subscriber 3 (subscriber station) for bandwidth greater than the minimum and determines whether the system 1 can meet this request (column 4, lines 52-57). Cox discloses 32 kb/s are allocated for telephone calls (voice connection) and 64 kb/s are allocated for modem connections (data connection) (column 4, line 31-32 and 54-55). Accordingly, the office takes official notice that data may employ internet protocol.

A person of ordinary skill in the art would have been motivated to employ Cox in Gorsuch so as to bill subscribers for allocated bandwidth (Cox, column 2, lines 60-63). At the time the invention was made, therefore, it would have been obvious to one of ordinary skill in the art to which the invention pertains to combine Gorsuch and Cox (*collectively*, Gorsuch-Cox) so as to obtain the invention as specified in claim 58.

With regard to claim 59, Gorsuch further discloses an ISDN modem 120 that relays voice and data to terminal equipment 110 (data) and 112 (voice) (two communication ports) as illustrated by figure 1 (column 4, lines 13-14).

With regard to claims 60, 61 and 62, Gorsuch discloses and a bandwidth manager 134 (processor) at the subscriber (column 4, line 20). Cox discloses a system controller 10 (*via a base station*) that receives requests (communicates data transmission capacity requirements / quality of service requirement) from subscriber 3 for bandwidth greater (desired connection) than the minimum and determines (evaluates said requirements) whether the system 1 can meet this request (authorizing) (column 4, lines 52-57).

With regard to claim 63, Cox discloses 32 kb/s are allocated for telephone calls (type of connection) and 64 kb/s are allocated for modem connections (type of data connection) (column 4, line 31-32 and 54-55).

With regard to claims 64 and 65, Gorsuch discloses and a bandwidth manager 134 (processor) at the subscriber (column 4, line 20). Cox discloses a system controller 10 (*via a base station*) that receives requests (communicates data transmission capacity requirements) from subscriber 3 for bandwidth greater (higher level) than the minimum and determines (determines which level) whether the system 1 can meet this request (authorizing) (column 4, lines 52-57). Accordingly, Gorsuch-Cox would also decrease data transmission capacity to the disclosed minimum, in the event that data channels were not being utilized.

With regard to claim 66, Cox discloses a priority status (prioritization) (column 4, lines 25-30).

With regard to claim 67, Cox discloses 32 kb/s are allocated for telephone calls (port) and 64 kb/s are allocated for modem connections (port) (column 4, line 31-32 and 54-55).

Allowable Subject Matter

4. Claims 88-108 are allowed. Claims 17, 18, 79, 86, 120 and 127 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew W Wahba whose telephone number is (571) 272-3081. The examiner can normally be reached on M-F 8:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau T Nguyen can be reached on (571) 272-3126. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should


Art Unit: 2661

you have questions on access to the Private PAIR system, contact the Electronic

Business Center (EBC) at 866-217-9197 (toll-free).

Respectfully Submitted,
Andrew Wahba
Patent Examiner
April 1, 2005




RICKY NGO
PRIMARY EXAMINER 4/4/05